

57. (New) The method of claim 44, further comprising:

returning the barrier from the open position to the closed position upon one of said remote transmitters leaving the radio frequency communication range of said controller; and

causing said base transmitter to continue to transmit said radio frequency search signal while causing said control circuit to maintaining the barrier in the closed position even though another of the remote transmitters remained within said radio frequency communication range of said controller.

58. (New) The method of claim 54, further comprising:

closing the barrier upon detecting one of said remote control units leaving a radio frequency communication range of said base receiver; and

causing said base transmitter to continue to emit the search signals while causing said control circuit to maintain the barrier in the closed position even though another of said remote control units remained within said radio frequency communication range of said base receiver.

REMARKS/ARGUMENTS

Claims 44, 46-48, 50, 51, 53-55, and 57-58 are now pending. Claims 44, 46, 47, 48, 50, 53, 54, and 55 are amended to specify that the barrier can be a gate or a garage door utilizing language specifically sanctioned by Superguide Corp. v. Direct TV Enterprises, 358 F.3d 870 (Fed. Cir. 2004). In other words, the amendments clarify that the barrier can be a gate, a garage door, or both. Accordingly, these amendments are not narrowing amendments. Claims 44, 46, 47, 48, 50, 53, 54, and 55 are also amended to clarify that the barrier operator transmits a search signal to multiple remote controls and responds to acknowledgements from the remote controls, or lack thereof, that are transmitted in response to the search signal. Claims 57-58 are added. Applicants respectfully request the Examiner reconsider and withdraw all outstanding rejections in view of the amendments and remarks contained herein.

SUMMARY OF THE INVENTION

The claimed invention is generally directed to barrier operator having a base unit that transmits a search signal to multiple remote control units, and responds to acknowledgment signals, or lack thereof, transmitted from the multiple remote control units in response to the search signal. In particular, the invention is directed to one or combinations of functional features that enable the barrier operator to handle multiple passive remote controls. For example, in some embodiments, the barrier remains in an open position so long as any one of the multiple remote control units is within a radio frequency communication range of the controller. Also, in other embodiments, the barrier operator causes the base transmitter to cease transmitting search signals to remote receivers in response to determining that all of the remote control units are within range. Additionally, in some embodiments, the barrier operator ceases transmission of the search signal from the base transmitter in response to the base receiver receiving an acknowledgment signal from all of the remote units. Further, in some embodiments, the barrier operator causes the controller to maintain the barrier in an open position as long as the base receiver receives a signal from at least one of multiple remote transmitters. Still further, in some embodiments, the barrier operator

maintains the barrier in an open position if one of the remote control units is in signal receiving range of the radio frequency search signal from the base transmitter, and another one of the remote control units is out of signal receiving range of the base transmitter. Even further, in some embodiments, the barrier operator, upon being manually closed, instructs a remote control unit in range to cease responding to its search signal. Yet even further, in some embodiments, the barrier operator causes the base transmitter to emit a search signal in response to actuating a base switch to cause the operator to open the barrier, and causes the barrier to remain open as long as the base receiver receives a response signal from one of the remote control units. Further still, in some embodiments, the barrier operator causes the base transmitter to emit a search signal in response to actuation of a base switch to cause the operator to open the barrier, and causes the barrier to remain open as long as the base receiver does NOT receive a response signal from one of the remote control units.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 44, 46-48, 50, 51 and 53-55 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,998,950 issued to Fitzgibbon et al. (hereinafter "*Fitzgibbon*") in view of U.S. Patent No. 5,942,985 to Chin et al. (hereinafter "*Chin*"). Applicant respectfully traverses this rejection.

The Examiner merely relies on Fitzgibbon et al. to teach a garage door opener responsive to wireless remote control. Fitzgibbon et al. do not teach, suggest, or motivate a garage door opener that transmits a search signal to multiple remote controls and responds to acknowledgements from the multiple remote controls to effect passive remote control of the barrier, including opening and closing of the barrier.

The Examiner relies on Chin to teach a lock operator for a desk or vehicle that transmits a pilot signal to a remote control and responds to a return signal from the remote control to unlock, but not open, the door. In one feature, a timer is employed to relock the lock after the remote control moves out of range or after the lock has been opened for a time. However, as best understood by Applicants, in the case that the remote control is still in range, the door would lock and notify the remote control, and the remote control would immediately tell the door to unlock, resulting in unlock of the

door. For example, Figure 3 illustrates that the lock operator, after setting the locked state, transmits a return message and then immediately begins transmitting the pilot signal once more. Figure 4 illustrates that the remote control, upon receiving the return message, immediately receives and responds to the pilot signal, resulting in immediate unlock of the lock. Therefore, the lock remains unlocked while the remote is in range, except for periodic reset activities in which it locks and then immediately unlocks. In the event that the Examiner does not understand this point, Applicants invite the Examiner to contact Applicants' representative by telephone for further discussion.

As an initial matter, one skilled in the art would not be led to combine the teachings of Fitzgibbon et al. with those of Chin because Chin is directed to unlocking a locked entry barrier, and not to opening an entry barrier. Presuming that one skilled in the art would equate *unlocking* a barrier with *opening* a barrier is the result of impermissible hindsight reasoning produced by a desire to apply the references in a fashion only evident in light of Applicants' disclosure. Thus, the rejection should be withdrawn because the teachings of Chin are not in a related field of endeavor.

Moreover, the teachings of Chin are not suitable for use in a barrier operator such as a garage door opener. For example, if a person of ordinary skill in the art were to combine the teachings of Fitzgibbon et al. with Chin, one would not arrive at a garage door opener system that effectively secures a vehicle within a garage or successfully handles multiple remote controls. For example, if the remote is left in the vehicle, as is the norm with garage door opener remote control units, then the garage door would remain open while the vehicle is parked in the garage. Also, even if the remote were taken from the vehicle into the residence or other adjoining structure, it is likely that the garage door would remain open due to the range needed to activate a garage door from a moving vehicle in a timely manner. Further, a garage door that periodically closes while the remote is in range runs the risk of closing upon a vehicle or other obstacle repeatedly. These failings are also evident for gate openers for vehicles, especially where distance from parking area to gate varies from end user to end user. Thus, Fitzgibbon et al. and Chin do not enable how to combine the passive remote control of Chin with the manually operated garage door opener of Fitzgibbon et al. to arrive at a

garage door opener system that effectively secures a vehicle within a garage or successfully handles multiple remote controls.

Applicants' claimed invention is directed to various embodiments of a method of operating a barrier utilizing multiple, passive remote controls as explained below:

Independent claim 44 recites causing the barrier to remain in an open position as long as any one of multiple remote control units is within a radio frequency communication range of the controller. This operation is quite different from that of a garage door that periodically closes and reopens even if the remote is in range (as would result from the suggested combination of Fitzgibbon et al. with Chin). Therefore, Applicants respectfully request the Examiner reconsider and withdraw the rejection of claim 44 under 35 U.S.C. § 103(a).

Independent claim 46 recites causing the base transmitter to cease transmitting signals to remote receivers in response to determining that all of the remote control units are within range. This operation is not enabled by Fitzgibbon et al. and Chin, and is contrary to the teachings of Chin, in particular. Fitzgibbon et al. and Chin do not enable how to handle multiple, passive remote controls so that the barrier can remain closed when all of the remote controls are in range. Therefore, Applicants respectfully request the Examiner reconsider and withdraw the rejection of claim 46 under 35 U.S.C. § 103(a).

Independent claim 47 recites ceasing transmission of signals from the base transmitter in response to the base receiver receiving a signal from all of the remote units. This operation is not enabled by Fitzgibbon et al., and is contrary to the teachings of Chin, in particular. Fitzgibbon et al. and Chin do not enable how to handle multiple, passive remote controls so that the barrier can remain closed when all of the remote controls are in range. Therefore, Applicants respectfully request the Examiner reconsider and withdraw the rejection of claim 47 under 35 U.S.C. § 103(a).

Independent claim 48 recites causing the controller to maintain the barrier in an open position as long as the base receiver receives a signal from at least one of multiple remote transmitters. This operation is quite different from that of a garage door that periodically closes and reopens even if the remote is in range (as would result from

the suggested combination of Fitzgibbon et al. with Chin). Therefore, Applicants respectfully request the Examiner reconsider and withdraw the rejection of claim 48 under 35 U.S.C. § 103(a).

Independent claim 50 recites causing said controller to maintain said barrier in an open position if one of said remote control units is in signal receiving range of said radio frequency signal from said base transmitter and another one of said remote control units is out of signal receiving range of said base transmitter. This operation is quite different from that of a garage door that periodically closes and reopens even if the remote is in range (as would result from the suggested combination of Fitzgibbon et al. with Chin). Also, the teachings of Fitzgibbon et al. taken with those of Chin do not enable how to operate in the case of multiple remotes. Therefore, Applicants respectfully request the Examiner reconsider and withdraw the rejection of claims 50 and 51 under 35 U.S.C. § 103(a).

Independent claim 53 recites subject matter whereby the operator, upon being manually closed, instructs a remote control unit in range to cease responding to its search signal. This operation is not enabled by Fitzgibbon et al., and is contrary to the teachings of Chin, in particular. Therefore, Applicants respectfully request the Examiner reconsider and withdraw the rejection of claim 53 under 35 U.S.C. § 103(a).

Independent claim 54 recites causing the base transmitter to emit a search signal in response to actuating a base switch to cause the operator to open the barrier, and causing the barrier to remain open as long as the base receiver receives a response signal from one of the remote control units. This operation is not enabled by Fitzgibbon et al., and is contrary to the teachings of Chin, in particular. Therefore, Applicants respectfully request the Examiner reconsider and withdraw the rejection of claim 54 under 35 U.S.C. § 103(a).

Independent claim 55 recites causing the base transmitter to emit a search signal in response to actuating a base switch to cause the operator to open the barrier, and causing the barrier to remain open as long as the base receiver does NOT receive a response signal from one of the remote control units. This operation is not enabled by Fitzgibbon et al., and is contrary to the teachings of Chin, in particular. Therefore,

Applicants respectfully request the Examiner reconsider and withdraw the rejection of claim 55 under 35 U.S.C. § 103(a).

NEW CLAIMS 57-58

Claims 57-58 are added. These additions are supported in the application specification as originally filed at paragraph [0040]. Therein, it is enabled that there can be two remote control units, but that the barrier can be closed and remain closed when one remote control unit leaves radio communication range while the other does not. For example, the controller can ignore acknowledgements from the remote control unit that does not leave the radio communication range. Alternatively, the remote control unit that does not leave the radio communication range can ignore the search signal. In this manner, the controller can continue to search for the returning transmitter and effect automatic opening upon its return. Also, the controller and remote control unit that remained in range can resume communication with one another when the barrier is opened manually.

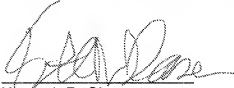
The operation described above cannot fairly be anticipated by references, such as Chin, that are directed to a passive keyless entry system for a vehicle or the like, in which it is typical for there to be one remote control unit. For example, one skilled in the art would not be led to apply the teachings of such a reference to achieve a system that accommodates multiple remote control units. Also, it is not the case that Chin teaches how to handle two remote control units where one of the units is to remain in range and be secured by operation of the system utilizing the remote control units as passive transmitters.

Accordingly, Applicants respectfully request that the Examiner favorably consider claims 57-58.

CONCLUSION

Applicant respectfully requests entry of this Amendment. Applicant believes that the application as amended is in condition for allowance. Applicant hereby authorizes the Commissioner to charge any fees due but not submitted with this paper to Deposit Account No. 07-0153. The Examiner is respectfully requested to call Applicant's Attorney for any reasons that would advance the current application to issue. Please reference Attorney Docket No. 125426-1079.

Respectfully submitted,
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